Section V
Harvesting, Hulling and Dehydration

Ethephon as a Harvest Aid -- Use of Adjuvants to Increase Ethephon Activity
George C. Martin

The adjuvants Glyodin and Chlorothalonil were added to 250 ppm ethephon and applied to Ashley walnut at PTB. Each adjuvant at 1/2 pint per 100 gallons of water with 250 ppm ethephon was as effective as 500 ppm ethephon without adjuvant in inducing hull dehiscence.

Harvest Handling
G. S. Sibbett, G. C. Martin, and M. Draper

Kernel Quality and Percent Moisture as Affected by Harvest Delay in Ethephon Treated and Untreated Ashley Walnut

In 1976, a test was initiated to determine kernel quality loss and percent kernel moisture following optimum harvest date for ethephon treated and untreated Ashley walnuts.

Ethephon treated nuts were harvested 10 days after application (8/30) and twice per week up to 25 days following treatment. Control nuts were harvested at the normal time (9/6) and twice per week until normal second picking, 10 days later. Kernel quality and percent moisture were monitored on each harvest date.

On the optimum harvest date, ethephon treated nuts contained 39.9% moisture. On the second to last harvest date, 10 days later, nuts from the same trees contained 20.9% moisture. On the last harvest date, 15 days later (following rain), nuts increased in moisture content to 27.5%. Control nuts initially contained 37.3% moisture and on the last harvest date, 10 days later, contained 30.9% moisture. Kernel color declined more rapidly in ethephon treated nuts than in controls. Mold also increased to higher levels, but insect damage, navel orangeworm, did not increase as rapidly, probably due to coincidence of the flight with condition of hull split.

Effect of Prolonged Drying on Walnut Kernel Quality

A test was developed to determine effect of prolonged drying on kernel quality. No difference in kernel quality existed if nuts were left up to 48 hours in the drier at 107° F following normal drying time. Kernel quality seemed to deteriorate following 48 hours in the drier.